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ABSTRACT

This study tests the widely cited proposition that 20% of a library's books account for 80% of its circulation. Using data collected for a collection development survey, it was found that of the sample of 4,213 books, 799, or 19%, accounted for 79% of the circulation during 1987. In fact, 25% of the books accounted for all of the circulation that year, with the other 75% of the books remaining on the shelves. However, a smaller sample of circulating books was used to test the hypothesis that perhaps it was not the same 20% of the books circulating each year. A subsample of books was checked to see of they had circulated in 1986, 1987, or both years. Of a subsample of 2,737 books, 1,013, or 37%, accounted for all of the circulation for the two years, with 387, or 38%, circulating in 1986 only; 335, or 33%, circulating in 1987 only; and 291, or 29% circulating in both years. Put another way, of the 678 books circulated in 1986, fully 335, or 49%, did not circulate in the following year, their place being taken by books uncirculated in 1986. The text is supplemented by one table and two graphs. (EW)

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DOES THE 80/20 RULE APPLY TO BOOKS?

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DOES THE 80/20 RULE APPLY TO BOOKS?

The 80/20 rule holds that 20% of anything accounts for 80% of that thing's activity. One might say, for example, that 20% of a store's merchandise accounts for 80% of its sales, or that 20% of the reference librarians answer 80% of the reference questions.

The rule has been cited as being true of book circulation in libraries as well, a sort of "given" that 20% of the books carry 80% of the circulation. If the rule is true, one could then identify the 20%, throw out the rest, and retain 80% of the circulation, a cost accountant's dream. But is it true? Having just completed a 10% arithmetic sample of our entire circulating collection for other purposes, I had the raw data with which to find out.

Our library has roughly 42,000 circulating books and our annual book circulation bounces around 20,000. In each book we have a year of acquisition stamp going back to our founding in 1969, and a yearly use record going back to 1977. In the summer of 1988 we took a 10% arithmetic sample of the entire collection and for each book in the sample recorded the acquisition year and yearly use since 1977. Our main purpose is to identify "hot" subject areas so we know where to concentrate our purchases. But the data is useful for more theoretical studies as well, such as this one.

The immediate step in checking out the 80/20 rule was to compile the circulations of books during 1987. Did 20% of the books account for 80% of the circulations that year" They did! I mean right on the button, or as close as makes no difference. Our sample included 4213 books. Of those, 799 or 19% accounted for 79% of the circulations that year. In fact, 25% of the books accounted for all of the circulations that year, the other 75% of the books just sat there.

On the face of it, we could throw out 80% of our books and lose only 20% of our circulations. Or we could throw out 75% of our books and lose no circulation at all. This had us wondering if we might patent a new 75/25 rule to go along with the 80/20 one.

But life is never that simple and we knew it. Our previous studies had shown that even books unused after 10 years still experienced a "first-use" level of about 10% the following year. Also, we knew that while new books greatly outperform older ones (see attached graph and explanation), the use of the older ones never hits zero. And we knew that by the summer of 1988, a full 91% of our 1977 acquisitions had been used at least once. There was something wrong with the 80/20 or 75/25 rule, despite its apparent accuracy.

The hypothesis we formed to explain this was that while 20% of the books bear 80% of the circulation in any given year, perhaps it is not the same 20% each year. We could check that with our data and did.

The method was to simply make a sheet up with three columns: circulated in 1986 only; circulated in 1987 only; circulated in both 1986 and 1987. We then made hash marks in the appropriate column as we check off each book that had circulated in 1986, 1987, or both. We stopped when we got to 1013 circulated books or about 65% of the way through the entire sample. Eyes do go bleary and the pattern was well evident by then anyway.

The results showed clearly that my hypothesis was correct. It is not the same 20% or even the same 25% each year that get used.

Of the 1013 books that circulated in 1986, 1987, or both years:

387 or 38% circulated in 1986 only
335 or 33% circulated in 1987 only
291 or 29% circulated in both years.

Put another way, of the 2737 books in my subsample, 1013 or 37% accounted for all of the circulation in two years, versus the 25% that had accounted for one year's circulation.

I'm sure that if I stretched my study to three or four years, the percent would grow as well.

In yet another way of looking at it, of the 678 books circulated in 1986, fully 335 or 49% did not circulate in the following year, their place being taken by books uncirculated in 1986.

I conclude that the 80/20 rule and my new 75/25 rule do apply to books, sort of. I also conclude that neither is very helpful except as consolation for seeing books go unused for a year or more. Neither rule will help a bit in weeding, or anything else really useful. They are not predictors.

Table of numbers for subsample study

2737 books in subsample, of those:

678 or 25% circulated in 1986.
626 or 23% circulated in 1987.
1013 or 37% circulated in 1986 or 1987 or both years.

1013 books circulated in 1986, 1987 or both. Of those:

387 or 38% circulated in 1986 only.
335 or 33% circulated in 1987 only
291 or 29% circulated in both 1986 and 1987.

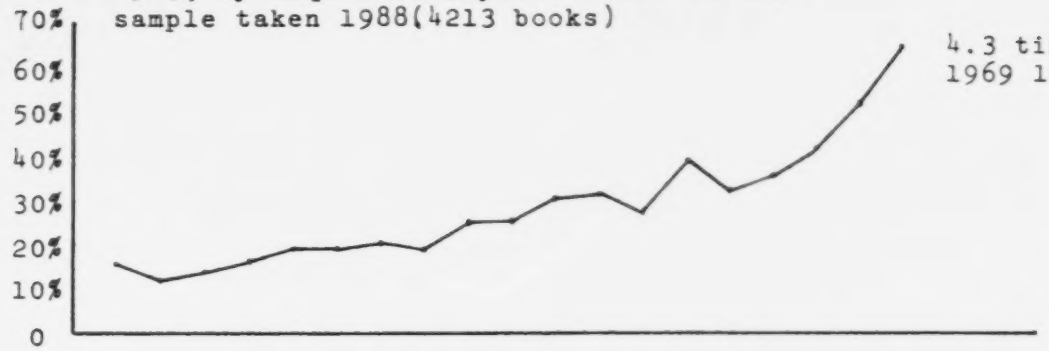
4213 books in entire sample of collection. of those:

1052 or 25% circulated in 1987, resulting in 1544 circulations when multiple circs. are counted in.

799 books or 19% of the 4213 accounted for 1221 or 79% of the total of 1544 circulations.

Please note the total book circulation for the collection was very similar in both years. It was 20,544 for 1986 and 19,464 for 1987.

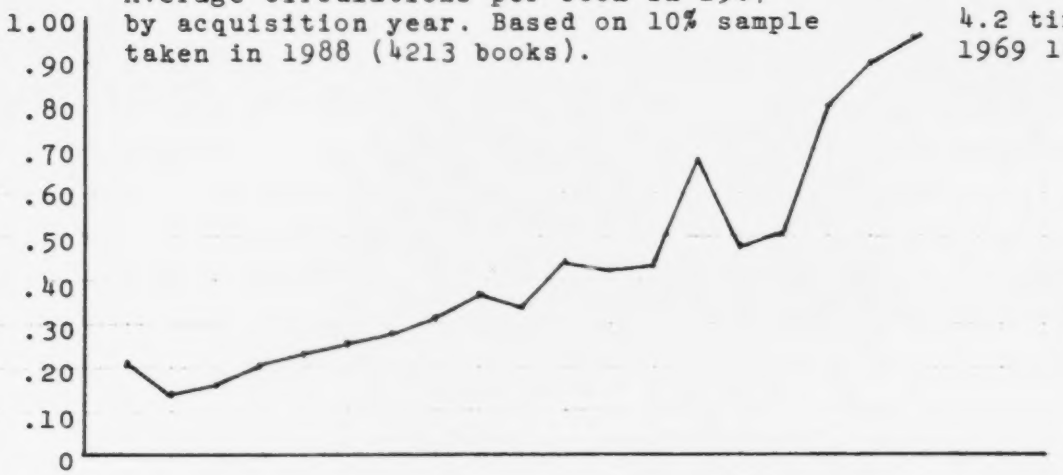
Percent of books used at least once in 1987, by acquisition year. Based on 10% sample taken 1988(4213 books)



4.3 times 1969 level

'69	'70	'71	'72	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87
15%	11%	13%	16%	19%	19%	20%	19%	25%	25%	30%	31%	27%	39%	32%	35%	42%	52%	65%

Average circulations per book in 1987 by acquisition year. Based on 10% sample taken in 1988 (4213 books).



4.2 times 1969 level

'69	'70	'71	'72	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87
.21	.14	.16	.20	.23	.25	.28	.31	.37	.34	.44	.42	.43	.68	.47	.51	.80	.90	.95

Graphs show relative use of books by age of book. Since 1969 acquisitions varied from as low as 1100 to as high as 4700 with the period since 1984 bouncing around 1600. However, 1982 saw big budget cuts and only 570 were acquired that year. This may account for their higher use since we were very careful to buy books only in highly used areas that year. We have done this study many times over the years and the results are always similar. New books circulate far more than older ones.

Explanation of the preceding graph showing book use in 1987:

We do our survey in summer when book use is extremely low. We pull every tenth book from the circulating collection and record its acquisition date and its use record by calendar year used.

We then tabulate the number of books in our sample by acquisition year, along with how many were used at all in 1987 and how many total circulations were experienced by that year's acquisitions. For example, our sample contained 195 books acquired in 1969. Thirty of them were used at all in 1987, or 15%. The thirty circulated a total of 40 times because some were used more than once. Dividing 40 circulations by 195 books gives an average circulations per book of .21.